

Notice of Allowability	Application No.	Applicant(s)	
	10/686,458	BLAND ET AL	
	Examiner	Art Unit	
	William H. Rodriguez	3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 9/2/05.
2. ☒ The allowed claim(s) is/are 7 and 21-31.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. <input type="checkbox"/> Notice of References Cited (PTO-892) 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | <ol style="list-style-type: none"> 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ 7. <input type="checkbox"/> Examiner's Amendment/Comment 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance 9. <input type="checkbox"/> Other _____ |
|---|--|

DETAILED ACTION

Allowable Subject Matter

1. Claims 7 and 21-31 are allowed.

Claims 28-31 were indicated to be allowable in the previous office action.

With respect to claim 7, applicant arguments presented *on page 7 lines 8-16* of applicant's response are found persuasive because the prior art of record neither discloses nor makes obvious the combination set forth in the independent claims, and especially does not show *"at least one vortex forming device includes a plurality of surfaces, wherein a substantial majority of the surfaces are substantially oblique to the path of the second flow"* in combination with the other claims limitations.

With respect to claim 28, the following is an examiner's statement of reasons for allowance: the prior art of record neither discloses nor makes obvious the combination set forth in the independent claims, and especially does not show *"at least one of the plurality of vortex forming devices is different from the other vortex forming devices, whereby the different vortex generator forms a different vortex in the catalytic flow, whereby the combustion flame is shaped based on the vortex forming devices selected"*, in combination with the other claim limitations.

With respect to claim 29, the following is an examiner's statement of reasons for allowance: the prior art of record neither discloses nor makes obvious the combination set forth in the independent claims, and especially does not show *"wherein the catalytic flow exiting the second catalytic module is substantially undisturbed, whereby the combustion flame is shaped by selective association of the vortex forming device with the catalytic modules"*, in combination with the other claim limitations.

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With respect to claim 30, the following is an examiner's statement of reasons for allowance: the prior art of record neither discloses nor makes obvious the combination set forth in the independent claims, and especially does not show *"a vortex forming device positioned substantially within the path of the second flow, wherein the vortex forming device is sized so at least about 50 percent and less than 100 percent of the second flow operatively engages the vortex forming device, wherein at least one vortex is formed in at least a portion of the second flow, whereby at least a portion of the first flow mixes at least a portion of the second flow"*, in combination with the other claim limitations.

With respect to claim 31, the following is an examiner's statement of reasons for allowance: the prior art of record neither discloses nor makes obvious the combination set forth in the independent claims, and especially does not show *"creating at least one first vortex in a first portion of the catalytic flow stream, wherein the first vortex causes at least a portion of the pilot flow stream to mix with at least a portion of the second catalytic flow stream, creating a second vortex in a second portion of the catalytic flow stream, wherein the second vortex causes at least a portion of the pilot flow stream to mix with at least a portion of the catalytic flow stream, whereby the different vortices are used to selectively shape the combustion flame"*, in combination with the other claim limitations.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Contact information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Rodriguez whose telephone number is 571-272-4831.

The examiner can normally be reached on Monday-Friday 7:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy S. Thorpe can be reached on 571-272-4444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


William H. Rodriguez
Examiner
Art Unit 3746

10/25/05